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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,495	03/17/2004	Mendez-Gallon Benjamin	VOI0247.CON	6751

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EXAMINER	
LAMB, BRENDA A	

ART UNIT	PAPER NUMBER
1734	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/802,495	BENJAMIN ET AL.	
	Examiner	Art Unit	
	Brenda A. Lamb	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/17/2004 and 7/06/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38-56,66-67,69 and 72* is/are rejected.

7)☒ Claim(s) *57-65,68,70,71 and 73* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/17/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 49 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "said second predetermined electric potential" in claim 49 lacks proper antecedent basis.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the magnetic field device must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 38 is rejected under 35 U.S.C. 102(b) as being anticipated by Kisler et al 4,513,683.

Kisler et al '683 teaches the design of an apparatus for applying coating to a moving substrate web which is comprised of an applicator unit arranged at a distance from the substrate, the applicator unit discharging the application medium onto the substrate as a free application medium jet, the applicator unit being kept at a first predetermined electric potential, the substrate proximate to applicator unit being kept at a second predetermined electric potential thereby producing an electric field, which exerts a force on the application medium jet as

it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet, wherein the substrate is one of a substrate of a material web. Thus every element of the claimed apparatus is set forth in claim 38 is taught by Kisler et al '683.

Claim 42 is rejected under 35 U.S.C. 102(b) as being anticipated by Sandiford et al.

Sandiford et al teaches the design of an apparatus for applying a medium onto a roll which is comprised of an applicator unit arranged at a distance from the roll and an electrode arrangement 5 located on an upstream side of said applicator unit, the electrode arrangement proximate to the applicator unit and located at a distance from the substrate, the electrode arrangement being at a predetermined electrical potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application to medium jet. Sandiford et al is capable of capable of applying a liquid or pasty medium to one side of a substrate. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Claims 38, 41-43, 50 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Kisler et al 4,489,672.

Kisler et al '672 teaches the design of an apparatus for applying coating to a moving substrate web which is comprised of an applicator unit arranged at a distance from the substrate, the applicator unit discharging the application medium onto the substrate as a free application medium jet, the applicator unit being kept at a first predetermined electric potential, the substrate proximate to applicator unit being kept at a second predetermined electric potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet, wherein the substrate is one of a substrate of a material web. Kisler et al '672 teaches as shown in Figure 2A an electrode arrangement which includes elements 46, 48, 50, 52, 54, 56, 58 upstream to and proximate to the applicator unit and located at a distance from the substrate, the electrode arrangement being at a third predetermined electrical potential which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet. Kisler et al '672 teaches every element of the apparatus as set forth in claims 38 and 41-42. With respect to claim 43, Kisler et al '672 teaches the electrode arrangement includes a plurality of projections or bristles. With respect to claims 50 and 53, Kisler et al '672 teaches a backing element with electrode which is coupled to power supply 46 which acts as web guide element or roll which transfers or conveys the web material.

Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view of DE 197 33 333.

Kisler et al '672 is applied for the reasons noted above. Kisler et al fails to teach his apparatus includes a backing element in wiping contact with the electrode. However, it would have been obvious to modify the Kisler et al '672 apparatus by providing the electrical potential by arranging its backing element such that it is in wiping contact with the electrode such as taught by DE '333 since DE '333 discloses doing so in a coating apparatus.

Claims 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view of Miller et al.

Kisler et al '672 is applied for the reasons noted above. Kisler et al '672 shows his applicator applies a bead to the substrate similar to Figure 1. Kisler et al '672 fails to teach his apparatus includes an attenuation device includes a suction device. However, it would have been obvious to modify the Kisler et al '672 apparatus by providing a suction device upstream of the applicator unit as well as a portion of the Kisler et al '672 electrode arrangement since Miller et al shows a vacuum chamber or suction device arranged upstream of the bead coater for applying coating onto a electrostatically substrate.

Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view Ankenbrand et al.

Kisler et al '672 is applied for the reasons noted above but fails to teach the use of a magnetic field device to also influence movement of the application medium. However, it would have been obvious to use the Kisler et al '672 bead

coating apparatus to perform the process of manufacturing magnetic substrates by applying a magnetic coating on the substrate since the use of bead coaters to apply magnetic coating to manufacture magnetic substrates is old in the art as exemplified by Ankenbrand and use a magnetic field device in addition to the electrode arrangement extending upstream to assist in directing the application medium onto the substrate.

Claims 44 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view of Kisler 4,402,035

Kisler et al '672 is applied for the reasons noted above. Kisler et al '672 fails to teach the electrode arrangement includes a plurality of individual electrodes arranged adjacent to one another in a direction transverse in the substrate. However, it would have been prima facie obvious to arrange the Kisler et al '672 electrode arrangement which includes a plurality of individual electrodes such that the electrodes are adjacent to one another in a direction transverse in the substrate for the obvious reason to provide the electrostatic charge across the width of the substrate and especially in view of Kisler '035 shows as depicted in Figure 1A arranging the electrode arrangement in such as manner. With respect to claim 52, Kisler '035 shows in Figure 1A grounding of the roller opposite the electrode arrangement through the bearing shaft of the roller. Therefore, it would have been prima facie obvious to apply a charge using an electrode through the bearing shaft of the Kisler et al '672 roller 38 since Kisler '035 shows that the electrical potential applied to the roller in an electrostatic charging apparatus is applied through the bearing shaft.

Claims 38 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Maier et al.

Maier et al teaches the design of an apparatus for applying coating to a moving substrate web which is comprised of an applicator unit arranged at a distance from the substrate, the applicator unit discharging the application medium onto the substrate as a free application medium jet by expulsion momentum as depicted by the upwardly flowing application medium, the applicator unit being kept at a first predetermined electric potential, the substrate proximate to applicator unit being kept at a second predetermined electric potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet, wherein the substrate is one of a substrate of a material web. Thus every element of the claimed apparatus is set forth in claims 38 and 40 is taught by Maier et al.

Claims 38-42, 45-47, 49 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Ord et al 5,290,600.

Ord et al teaches the design of an apparatus for applying coating to a moving substrate web which is comprised of an applicator unit arranged at a distance from the substrate, said applicator unit discharging the application medium onto the substrate as a free application medium jet, the applicator unit being kept at a first predetermined electric potential, the earthed or grounded substrate proximate to applicator unit being kept at a second predetermined electric potential thereby producing an electric field, which exerts a force on the

application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet, wherein the substrate is one of a substrate of a material web. Ord et al further shows the apparatus an electrode arrangement 25 located on an upstream side of the applicator unit, the electrode arrangement proximate to the applicator unit and located at a distance from the substrate, the electrode arrangement being at a predetermined electrical potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet. Ord et al teaches every element of the apparatus as set forth in claims 38 and 41-42. With respect to claim 39, Ord et al shows a sheet or curtain of material under force of gravity is dispensed on the substrate thereby reading on a curtain coater (see column 3 line 40). With respect to claim 40, Ord et al alternatively teaches that the material may be feed under pressure to the substrate which reads on coating using expulsion momentum (see column 3 line 41). With respect to claim 45, Ord et al shows in Figure 1 an electric field producing device 25 located downstream of the application unit, the electric field producing device producing a force that is exerted on the application medium and directed toward the substrate. With respect to claim 46, Ord et al teaches in Figure 1 that the electrodes positioned upstream and downstream exhibit a predetermined electrical potential. The functional recitation that the applicator unit and substrate is at a predetermined electric potential has not been given patentable weight because it is narrative in form. In order to be given patentable

weight, functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional recitation. In re Fuller, 1929 C.D. 172; 388 O.G. 279. In any event, Ord et al teaches the substrate is grounded or earthed and the applicator unit includes a conducting surface 16 for providing a predetermined electric potential. With respect to claims 47 and 49, Ord et al teaches the substrate is grounded or earthed and the applicator unit includes a conducting surface 16 for providing a predetermined electric potential which is within the scope of the claim (see column 4 line 51-59).

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ord et al.

Ord et al is applied for the reasons noted above but fails to teach electrical potential is within the scope of the claim. However, it would have been obvious to optimize the electrical potential from the recited source in the Ord et al such that they are within the scope of the from the such that it is within the scope of the claim since Ord et al teaches optimizing the electrical potential dependent on spacing between the nozzle and target or substrate (see column 2 line 63 to column 3 line 2).

Claims 66-67 and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by Conroy et al.

Conroy et al teaches the design of an apparatus for applying a coating to at least one side of a moving substrate, comprising: a curtain applicator unit that

discharges the application medium onto the substrate as a curtain, the curtain moving from said curtain applicator unit to the substrate substantially under the force of gravity; and a plurality of edge guiding elements that guide lateral edges of the curtain, at least one of the edge guiding elements having a surface being one of roughened, wherein the substrate is one of a surface of a material web (see column 5 lines 37-39). With respect to claim 69, Conroy et al teaches the guide element is constructed from a material within the scope of the claim. With respect to claim 67, Conroy et al teaches the wetting angle of the guide element is within the scope of the claim at its upper end (see column 4 lines 36-38).

Claims 66-67 and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by Yapel et al.

Yapel et al teaches the design of an apparatus for applying a coating to at least one side of a moving substrate, comprising: a curtain applicator unit that discharges the application medium onto the substrate as a curtain, the curtain moving from said curtain applicator unit to the substrate substantially under the force of gravity; and a plurality of edge guiding elements that guide lateral edges of the curtain as it flows along the surfaces of the applicator, at least one of the edge guiding elements having a surface being one of roughened, wherein the substrate is one of a surface of a material web (column 11 lines 41-45). With respect to claim 69, Yapel et al teaches the guide element is constructed from a material within the scope of the claim (see column lines 42-49). With respect to claim 67, Yapel et al teaches the wetting angle of the guide element is within the scope of the claim at its upper end (see column 9 lines 18-20).

Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conroy et al in view of WO 89/05477 (Hartman).

Conroy et al is applied for the reasons noted above but fails to teach an electrode proximate or near at least one of the guide elements. However, it would have been obvious to modify the Conroy et al apparatus by arranging an electrode proximate or near at least one of the guide elements since Hartman teaches doing so for the taught of increasing the coating speeds.

Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yapel et al in view of WO 89/05477 (Hartman).

Yapel et al is applied for the reasons noted above but fails to teach an electrode proximate or near at least one of the guide elements. However, it would have been obvious to modify the Yapel et al apparatus by arranging an electrode proximate or near at least one of the guide elements since Hartman teaches doing so for the taught of increasing the coating speeds.

Claims 57-65, 68, 70-71 and 73 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Brenda A. Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays.

Brenda A Lamb
Examiner
Art Unit 1734